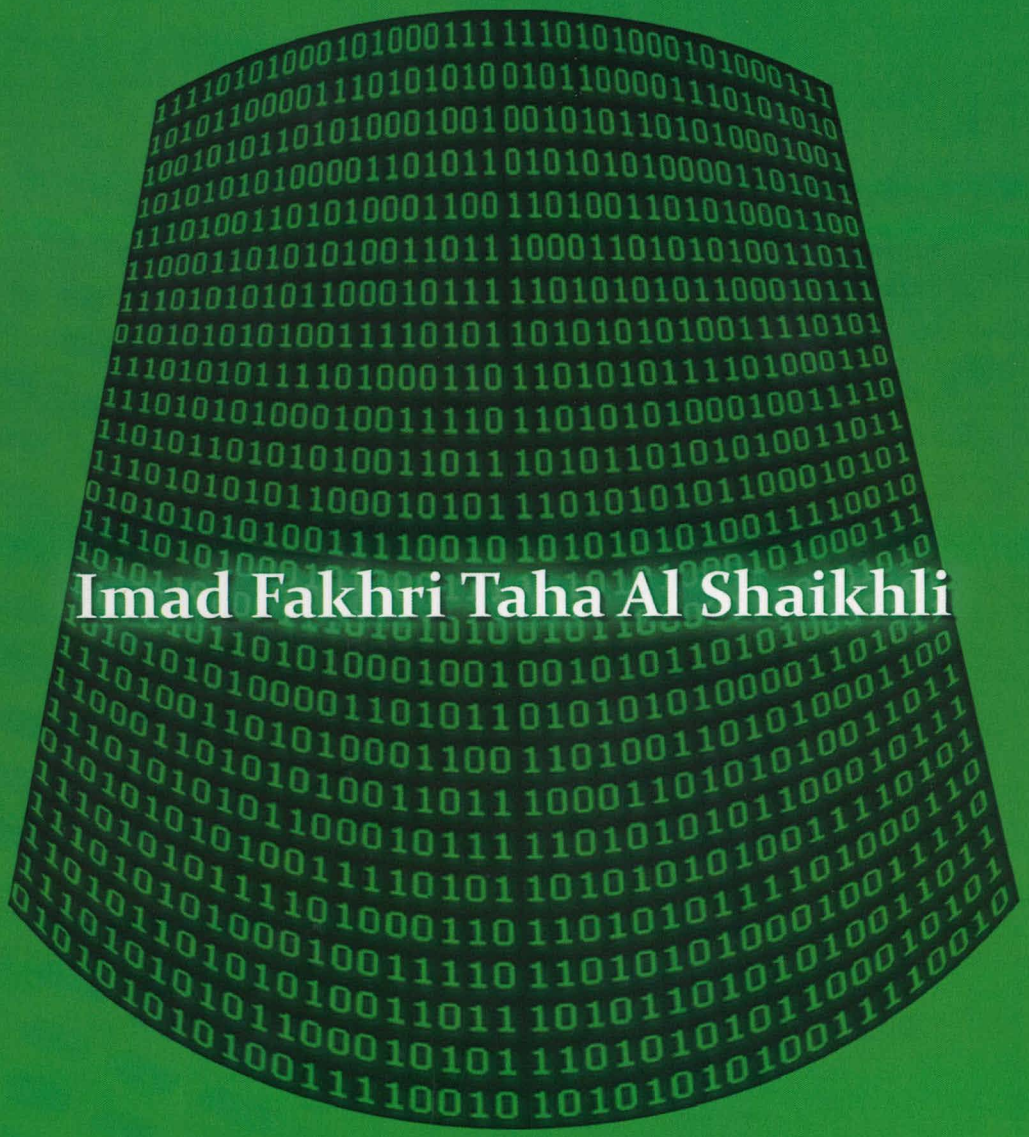
Cryptography

Past, Present and Future



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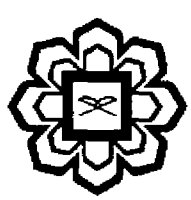

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- Ahmad Faridi Abdul Matin
- Sibomana Hilali Hussein

ABSTRACT

In this article we will talk about the description of Message Digest (MDx) Family. Also we will introduce into Message Digest 2 (MD2), Message Digest 4 and 5 (MD4 and MD5). Moreover, we will describe the Security of the MDx family hash function.

DESCRIPTION

According to the IETF's memorandum in regards to MD2, MD4 and MD5, all of these algorithms take as input a message of arbitrary length and produce as output a 128-bit (16 bytes) message digest of the input. These algorithms were intended for digital signature applications where a message needs to be compressed securely before being signed with a private key under the public key cryptography such as the RSA. Despite their apparent similarities they are different in many ways. (Kaliski, 1992; Rivest, 1992)

Essentially, MD2, MD4 and MD5 all use the same mechanism. The message is divided into blocks of certain size (depending on which message digest is in use). Each block will then be processed with a compression function (see Figure 10.1). (Robshaw, 1996)